

REMARKS

This application was originally filed on 21 December 1999 with ten claims, three of which were written in independent form. Claim 10 was amended on 21 February 2002. Claims 11-13 were added on 17 June 2003. Claim 1 was amended on 22 March 2004. Claims 7, 10, 11, 12, and 13 were amended on 21 February 2006.

Claims 1-13 are pending. Claims 1-6 and 10 are allowed.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Publication No. 10-221710 to Taketo *et al.* ("Taketo"). The applicant respectfully disagrees and submits the Examiner has failed to present a *prima facie* case of obviousness.

"A person shall be entitled to a patent unless," creates an initial presumption of patentability in favor of the applicant. 35 U.S.C. § 102. "We think the precise language of 35 U.S.C. § 102 that, 'a person shall be entitled to a patent unless,' concerning novelty and unobviousness, clearly places a burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103, see *Graham and Adams*." *In re Warner*, 379 F.2d 1011, 1016 (C.C.P.A. 1967) (referencing *Graham v. John Deere Co.*, 383 U.S. 1 (1966) and *United States v. Adams*, 383 U.S. 39 (1966)). "As adapted to *ex parte* procedure, *Graham* is interpreted as continuing to place the 'burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103'." *In re Piasecki*, 745 F.2d 1468 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d at 1016).

"The *prima facie* case is a procedural tool which, as used in patent examination (as by courts in general), means not only that the evidence of the prior art would reasonably allow the conclusion the examiner seeks, but also that the prior art compels such a conclusion if the applicant produces no evidence or argument to rebut it." *In re Spada*, 911 F.2d 705, 708 n.3 (Fed. Cir. 1990).

"Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but

unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham v. Deere*, 383 U.S. 1, 17-18 (1966).

“To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). ‘All words in a claim must be considered in judging the patentability of that claim against the prior art.’ *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” MPEP § 2143.03.

“To support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985).

Claim 7 recites, a color modulator comprising “alternating layers of electrodes and dielectric materials, wherein voltages applied to said electrodes are operable to alter a refractive index of said dielectric material between said electrodes to filter an incident white light beam into a light beam of at least one of at least three colors.”

The Examiner stated, “Taketo does not specifically teach voltage being applied to alter a refractive index of the dielectric material between the electrodes with respect to achieving primary colors.”

The applicant respectfully submits, Claim 7 does not recite “achieving primary colors” but rather “filter an incident white light beam into a light beam of at least one of at least three colors.”

The Examiner further states, “Taketo teaches setting of dichroic mirrors (27G, 27R, 27B) with respect to dielectric multi-layers and reflected wave length filed such that ZrO2 etc. can be used as a high refractive index film and MgF2 etc. can be used as a low refractive index film and each film is formed with electron beam deposition (see page 8, the first four lines under ‘detailed Description’).”

The passage referenced by the Examiner states, "It is made, as for 580nm or more and dichroic mirror 27B, for 490-580nm and dichroic mirror 27R to be set . . . to 490nm or less by dichroic mirror 27G. Concretely, ZrO₂ can be used as the high refractive-index film, MgF₂ etc. can be used as low refractive-index film, respectively, and each film is formed with electron beam vacuum deposition." Thus, Taketo appears to merely state the wavelengths chosen for his three fixed color modulators, and two films vacuum deposited to form the dichroic mirrors. The passage appears to be completely irrelevant to "voltages applied to said electrodes are operable to alter a refractive index of said dielectric material between said electrodes to filter an incident white light beam into a light beam of at least one of at least three colors" recited by Claim 7.

The Examiner stated, "Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Taketo's high and low refractive index films with respect to application of reflected wavelength filed as illustrated in Fig. 1 for the purpose of deriving the three colored lights (1G, 1R, 1B) as taught by Taketo." The applicant respectfully submits that the Examiner has failed to apply the teachings of Taketo to the specific claim limitations recited by Claim 7. Simply alleging that Taketo uses refractive index films to derive color lights does not address the limitations of Claim 7 as required by *Warner, Piasecki, Spada, Royka, Wilson, and Clapp* as cited above.

As the Examiner's rejection of Claim 7 as being unpatentable over Taketo is unsupported by the prior art, it should be withdrawn.

Claims 8, 9, and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Taketo. The applicant respectfully disagrees and submits the Examiner has failed to present a *prima facie* case of obviousness.

Claims 8, 9, and 11 depend from Claim 7 and should be deemed allowable for that reason and on their own merits. For the reasons provided above with respect to Claim 7 the prior art does not show, teach, or suggest the limitations of the independent claim, much less the limitations of the independent claim in combination with the additional limitations of the dependent claims. The Examiner's rejection, therefore, is unsupported by the prior art and should be withdrawn.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Taketo in

view of U.S. Patent No. 5,317,429 to Mochizuki *et al.* ("Mochizuki"). The applicant respectfully disagrees and submits the Examiner has failed to present a *prima facie* case of obviousness.

Claim 12 recites a color modulator comprising "alternating layers of electrodes and dielectric materials, wherein voltages applied to said electrodes are operable to filter an incident white light beam into a light beam comprised of at least one of at least three colors."

The Examiner stated, "Taketo does not teach dielectric material being selected from the group consisting of LiNbO₃, LiTaO₃, NH₄H₂PO₄, KH₂PO₄ and CdTe. Mochizuki on the other hand teaches a cladding layer, which may be any material whose refractive index can be changed by the electro-optical effect and is, for example, a ferroelectric substance such as LiNbO₃ (col. 4, lines 43-50)."

Taketo teaches a reflection type color display device (title) while Mochizuki teaches an optical switching device utilizing coherent light (abstract). Without acquiescing as to the combination of Taketo and Mochizuki, or the functionality thereof, the applicant respectfully submits the Examiner has failed to show the references expressly or impliedly suggest the claimed combination, or "present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references" as required by *Clapp*.

The Examiner further stated, "It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Taketo's display system shown in Drawing 1, to adapt Mochizuki's layer, LiNbO₃ as a dielectric layer because the use of the layer, LiNbO₃ helps function a liquid crystal display device as taught by Mochizuki (col. 6, lines 5-20)." This is simply a conclusory statement by the Examiner, rather than a teaching or suggestion of the prior art. As such, the Examiner has failed to present a *prima facie* case of obviousness under 35 U.S.C. § 103(a) and the rejection therefore is defective and should be withdrawn.

Claim 13 depends from Claim 12 and should be deemed allowable for that reason and on its own merits. For the reasons provided above with respect to Claim 12 the prior art does not show, teach, or suggest the limitations of the independent claim, much less the limitations of the independent claim in combination with the additional limitations of the dependent claim. The Examiner's rejection, therefore, is unsupported by the prior art and should be withdrawn.

In view of the amendments and the remarks presented herewith, it is believed that the claims currently in the application accord with the requirements of 35 U.S.C. § 112 and are allowable over the prior art of record. Therefore, it is urged that the pending claims are in condition for allowance. Reconsideration of the present application is respectfully requested.

Respectfully submitted,



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